State of Texas
County of Travis

AFFIDAVIT OF DR. GERALD L. HURST, PhD

Before me, the undersigned official, on this day appeared Dr. Gerald L. Hurst, who is personally known to me, and first being duly sworn, upon his oath deposed and said:

My name is Gerald L. Hurst. I am over the age of 18, and I currently reside in Travis County, Texas. I have never been convicted of a crime and I am fully competent to make this affidavit. Unless expressly stated otherwise, I either have personal knowledge of the facts stated herein or I have described the documents from which I have acquired my information. I believe the statements made in this affidavit to be correct.

I am a Cambridge PhD chemist with extensive experience in the field of arson investigation and the underlying sciences. I graduated first in my college class and was awarded a National Science Foundation Fellowship. My career included the position of Chief Scientist of the Atlas Powder company, then the largest manufacturer of explosives in the US. My consulting specialty is the debunking of junk science as it is practiced in the investigation of fires and explosions. I have over thirty years of experience in the field of fire and explosives research beginning with research and development work on covert warfare arson techniques during the Viet Nam war.

I have investigated numerous accidental fire and arson cases over the last 28 years and testified many times in both state and federal courts about the cause and origin of fires. I am familiar with the analytical procedures used in this Sonia Cacy case and am experienced in interpreting the type of GC-MS chromatograms used to identify the accelerants alleged to have been used to start the fire which resulted in Ms. Cacy's incarceration.

This affidavit is based on an in-depth investigation and analysis of the evidence in the Sonia Cacy case carried out on a regular and continual basis over approximately the last three years. I have personally inspected the scene of the fire which she was convicted of setting in the alleged arson/murder of her uncle, Bill Richardson.

I have read the entire statement of facts from the original trial and the subsequent resentencing trial numerous times and studied both in minute detail. I have also investigated all of the original evidence used in the trial and much new evidence which was not uncovered by her attorney. My work on this case has uncovered crucial evidence which was not available to the defendant at trial for two distinct reasons:

1. Sonia Cacy ,was not originally provided with any expert help to offset what was primarily a case based on unrebutted esoteric scientific evidence and unrebutted medical testimony.

2. The prosecution withheld or misrepresented extremely important exculpatory evidence related to chemical analysis, fire investigation and chain of possession documents.

Sonia Cacy had virtually no technical or medical experts to help her answer the charges based on alleged scientific evidence. Mr. Dangerfield, a fire fighter from Odessa attempted to assist in her defense, but his trial testimony shows clearly that he was not a fire investigator and had no scientific training.

It is not uncommon in fire investigations to have false allegations of arson raised as a result of conclusions by investigators who have no background in the fundamental sciences of chemistry and physics but rely on what are sometimes referred to as "old wives tales," that is, principles that have long been disproved but continue to be accepted Most other disciplines of forensic science require that their practitioners first obtain a thorough education in at least one of the accepted primary physical sciences, but this is not yet true in the field of arson.

I do not mean to imply that an investigator must have a degree in chemistry or physics to achieve competency. Many good investigators rely successfully on work experience augmented by self-study. However, there remain a significant number who continue to rely on older principles which have been disproved and which lack a sound scientific basis.

As an example of the influence of the more poorly scientifically trained minority, I cite the recent filing in federal court by the American Association of Arson Investigators of an amicus curiae brief proposing that fire investigators not be subject to the Daubert Law. Daubert requires proof of the general acceptance of scientific theories used to support expert testimony. This position is a reflection of the fact that a significant number of the members of the largest professional arson investigation society in America do not wish their testimony to be held to the same rigorous scientific standards that are required in most other areas of forensic science. Texas is now a Daubert state and applies the principle of putting scientific theories to the test of validity before they can be expounded to a jury. Unfortunately for Ms. Cacy, the Daubert law had not yet taken effect in Texas at the time of her trial. Had it been law at that time and had she been provided with technical expertise, much of the unsound evidence used to indict and convict her would not have been admitted and she would have gone free.

I and numerous other experts involved in this case are all working on a pro bono basis. None of us receive any remuneration or reimbursement of expenses. It is remarkable that so many well-trained and widely respected scientific investigators have been willing to devote their time and resources to help a woman they have never met. Their excellent work is uniformly motivated only by a sense of obligation to justice based on their evaluation of the evidence, which they find does not in any way indicate the commission of a crime.

The prosecution's case against Sonia Cacy is difficult to describe in the ordinary narrative style of a letter or affidavit. Every random detail of the investigation, whether relevant or not, was turned into an indicator of guilt. This approach resulted in a hodgepodge of facts and assumptions being forced into a scenario devoid of coherence. A combination of sloppy evidence handling and the failure to maintain chain of custody documents by the prosecution's arson debris analysts and pathologist results in a story so complex that it can better be handled by itemizing the various

claims or allegations into classification areas within which the often unrelated errors can be addressed one at a time.

Following the introduction of the overall case perspectives of the prosecution and the defense, the balance of this affidavit is divided into specific subject areas, each containing a series of paragraphs which list the allegations made by the prosecution followed by the opinion I reached based on the results of my study. This format allows this document to be used as a reference source which can be consulted to see both sides of any specific issue not covered in enough detail in the more abbreviated introductory sections on prosecution and defense perspectives.

THE PROSECUTION'S CASE PERSPECTIVE

As seen by the prosecution, these are the events that led up to the arrest of Sonia Cacy for arson/murder and the elements of the alleged evidence used to convict her:

Sonia Cacy allegedly arrived from out of town and moved in with her uncle, Bill Richardson (Uncle Bill) in Fort Stockton, Texas on or about 10/1/91.

Prior to her arrival, Uncle Bill allegedly had not had any problems.

Sonia allegedly began a campaign to terrorize the old man which included setting a small fire on the concrete back porch in a plastic pan on 10/10 and one small fire each in the attached washroom shack and in her uncle's office room on 11/2/91.

Sonia's alleged motive in setting the three small fires was "to time the arrival of the fire department."

Sonia allegedly had a motive to kill Uncle Bill in the form of a will which left her his entire estate.

On the morning of 11/10/91, in an alleged intoxicated rage or stupor, Sonia allegedly tiptoed into the living room where Uncle Bill was sleeping, poured gasoline on him, stepped back and tossed a match.

The thermal burns from the gasoline allegedly killed the man without his taking a breath of the smoke.

Upon the alleged ignition of the gasoline an fire ball rose from Uncle Bill's body and "came back down" from the ceiling, thereby singeing the top of Sonia's hair and covering her with soot.

Sonia allegedly did not call in the fire.

Sonia climbed out a window in a shorty nightgown to distract the fire fighters.

Sonia was allegedly drunk and struggled with the police and firefighters to hinder them.

Sonia allegedly "changed her story" after arriving at the hospital.

In the hospital, Sonia chewed off her fingernails, allegedly to hinder the police from taking fingernail scrapings.

The State's fire investigators allegedly proved the presence of an accelerant based on the following evidence:

1. The burns to the decedent's body which allegedly cannot be otherwise explained.

2. A burn on the carpet beneath the cot in the living room allegedly indicative of an accelerant.

3. The fast, hot smoky nature of the fire which allegedly cannot otherwise be explained.

4. Local burns to the rafters above the body which allegedly can only be explained by gasoline on the decedent's body

The State's arson debris analyst allegedly found gasoline in the remnant of Uncle Bill's clothing using GC-MS analysis.

The autopsy allegedly showed that Uncle Bill died of thermal burns and the manner of death was homicide.

THE DEFENSE'S CASE PERSPECTIVE

Based on approximately three years of post-conviction research by myself and numerous other pro bono experts, these are the factors and events that led up to the arrest of Sonia Cacy and the evidentiary elements which support the cause of the fire and the death of Mr. Richardson (Uncle Bill) as accidental:

Sonia and Uncle Bill had lived together in a congenial father-daughter relationship off and on for decades. Sonia had lived continually with her uncle for the last several years before the fire.

When Sonia returned from a trip of several weeks to care for her ill husband, Billy, and her injured son, Blake, she and her family found Uncle Bill suffering from a form of dementia accompanied by loss of short-term memory and a paranoid belief that someone "was out to get him." Although the old man had a bedroom of his own, he had moved a cot into the living room so that he could be on guard. He was also carrying a .22 pistol on his person for self-protection even at home.

Sonia returned to Fort Stockton when she did in order to help Uncle Bill through the ordeal of cataract surgery which was scheduled for the day after the fire. Bill, who had a fear of doctors following the removal of a healthy kidney through a medical error, had begged Sonia to return to help him.

Uncle Bill had a prior history of starting fires including:

1. An incident in which he was hospitalized for burns suffered when he exploded a spray paint can by heating it with an open flame burner.

2. A fire started in a plastic pan in his office which burned out a section of carpet and was extinguished by Sonia's husband Billy.

3. The deliberate burning of an old house on his oil lease as related to Sonia's son by Uncle Bill.

4. A burned out seat in his pickup truck.

5. Cigarette burns on all the furniture in the house, on Uncle Bill's clothing in his closet, and on linens on his bed as seen by myself, Investigator Ken Gibson and the State's experts.

6. Uncle bill's habit of burning his credit card receipts in a plastic pan in the house as was frequently witnessed by various family members.

There were three fire incidents after Sonia returned from her mercy trip:

1. Uncle Bill threw out a pan of overheated kitchen grease in a skillet and melted one of his plastic junk pans containing an oil filter. The police who interviewed him after two other subsequent fires failed to note his faltering memory and obvious sense of paranoia and later attributed this harmless event to Sonia. The pan was sitting on concrete away from any fuel load, was not hazardous and was not called in.

2. At about 3:30 A.M. on 11/2/91 there was a small fire in a plastic pan in Uncle Bill's office. The fire would only have burned a hole in the carpet like Bill's previous plastic pan fire in the same room, which had been extinguished by Billy in a prior incident unrelated to Sonia. Because of Uncle Bill's failing mind and sight, he improperly used a fire extinguisher and blew the fire onto the curtains which necessitated calling the fire department. The police were unaware of his prior similar fire and subsequently attributed the second office fire to Sonia. Her only connection to the fire was calling 911.

3. At about 6:30 A.M. on the same morning as the office fire, a second fire broke out in a detached shack full of debris, which served as a work shop and wash room. The cause and origin were not determined. The fire may have been started by Uncle Bill as a consequence of his mental state that morning or possibly by a cigarette or other means

attributable to the police and fire officials who had been milling about the property shortly before the fire. The only evidence supposedly linking Sonia to the fire was the fact that it was again she who called it in.

Because of Uncle Bill's symptoms of heart trouble and failing mental health and perhaps out of superstition, he had a premonition of death which led him to scrawl out a handwritten will draft on or about 10/13/91. His mental condition is reflected in the opening statement of the document:

> I Bill Richardson
> feel like I may die
> Tonight This is Friday
> night at 12:30 oct. 13, 91

The document is just over one page of large scrawl in marker pen, including the part on the envelope. It is executed in about half script and half printing and the page is signed three time sequentially, once in marker pen and twice in ball-point. On the envelope portion of the will draft, which was not seen by the jury, Uncle Bill had written clear evidence of the length and character of his relationship with Sonia:

> I love my SONIA
> she has helped me for many years.

As evidence of Uncle Bill's declining mental faculties, the date assigned to the document is noteworthy: Friday the 13th. The 13th day of October 1991 was Sunday.

He asked Sonia to fill out a formal will blank which he gave her but she did not do so. Although the will draft was used as an imputed motive for murder, Uncle Bill's estate was worthless. Sonia had always done all of her uncle's books and therefore knew that his death would bring her nothing but the same uninsured house she was accused of burning.

When the fire associated with the death occurred on the morning of 11/10/91, Sonia did call it in before exiting the house as is shown by swòrn affidavits by police officers.

Sonia did not run around during the fire in a shorty nighty to distract police. She put on a red Mexican house dress provided by a neighbor as soon as possible and she was wearing this dress when most of the authorities arrived.

Sonia did struggle with the officials in an attempt to reenter the house to save her uncle. An emotionally distraught Sonia did curse them but with the good reason that they improperly made no attempt at any time to rescue her uncle from the now slowly burning house. Although the authorities did not know for sure that the old man was dead, they failed to rescue him or even approach his body for ten hours after the fire in order to preserve their supposed "crime scene."

If Sonia's hair was singed, it happened when she climbed over a police officer in the doorway of the room which was on fire.

Sonia was covered with soot because of her struggle to reenter the house. The men with whom she struggled had each crawled on their bellies into the burning house and were covered with soot from the floor.

Sonia was not drunk. Only two of the witnesses who had an opportunity to smell her breath testified to the aroma of alcohol and nobody testified to any other symptoms of drunkenness. Her blood tested negative for alcohol. The evidence suggests that she may have had a relatively low level of alcohol on her breath from a few drinks before going to bed, which was detectable by some but not others.

Sonia did not change her story at the hospital. She merely expressed an ongoing doubt about whether she remembers the early events of the fire or might have dreamt them as she was awakening.

Sonia did not bite her nails to prevent the police from taking scrapings. She has been a compulsive fingernail biter since childhood and always bit her nails to the quick. Only one Officer, Carreon, thought he had observed longer nails earlier in the day. The fingernail scrapings were irrelevant to the case except as innuendo because the alleged crime did not include any physical contact with Uncle Bill. Also, Sonia had no way of knowing the authorities would get a warrant for the scrapings until they appeared in her hospital room with the warrant and a special nurse.

The reevaluation of the State's fire investigation shows that all of their alleged fire pattern evidence can readily be explained by materials present at the scene:

1. The burns to the decedent's body were caused by his fully clothed condition before the fire, the fire's radiation, and the flaming drapes which fell on and about his body. The prosecution failed to learn about the existence of the drapes despite extensive available clues.

2. The burn on the carpet beneath the cot in the living room was a natural and unavoidable consequence of the melting and flaming polyurethane foam of the two cot mattresses. The prosecution failed to tell the jury about the effect of the mattresses.

3. The fast, hot smoky nature of the fire is fully accounted for by the burning of the polyurethane cot mattresses, unmentioned to the jury by the prosecution, and the curtains, which were overlooked by the State's experts.

4. Local burns to the rafters above the body did not show greater charring as alleged by the prosecution based on a misleading photograph. The relatively even charring of the entire 12-foot span of the rafters was a result of the curtains which the prosecution did not discover in their investigation.

The analysis of the decedent's clothing remnants from the autopsy by the prosecution's arson debris laboratory was incorrect. The data from the analysis do not show the presence of gasoline as reported. The analysis has been reviewed by numerous independent experts in arson debris analysis who concur that the State's purported analyst erred in finding gasoline.

The State's analytical lab cannot account for the origin of the clothing sample they misanalyzed. The only chain of custody documents presented in court were created especially for the trial 14 months after the fire (1/20/93) and were backdated to appear to have been prepared on the alleged date of the transfer (11/15/91), only four days after the autopsy.

The State's arson debris analyst who testified to having conducted the analysis did not actually perform that analysis. The man who performed the analysis did not testify.

The State sent the original clothing remnants from the body of Bill Richardson to an independent laboratory for analysis. The results of the analysis were negative for accelerants. The State misrepresented the results of the exculpatory negative analysis to the jury in four distinct ways:

1. The district attorney led the jury to believe that the sample had been stripped of gasoline by a prior analysis.

2. The State's expert analyst led the jury to falsely believe the contents of the exculpatory original can of clothing remnants contained "some other clothing or stuff."

3. The State's witness, Gerry Gilmore, led the jury to believe that the method used to extract the hydrocarbons from the exculpatory can of clothing remnants used a different technique from that used by the State's expert in the now discredited positive analysis.

4. The State's alleged arson debris analyst denied knowledge of the nature of the clothing tested in the exculpatory analysis when, in fact, the analysts own documents prove he knew precisely what the materials were and knew their origin.

If Sonia Cacy had been given access to the same sort of experts who are now working on her case on a pro bono basis, the evidence cited above would have been used in her defense at trial and the outcome would probably have been an acquittal.

THE CASE DETAILS, A SUMMARY OF ALLEGATIONS AND ANSWERS

This major section of the affidavit is divided into ten areas in which the case is presented in the form of specific allegations related to each area followed by answers to those allegations based on my study of the case materials. The ten areas are:

I. PRE-FIRE HISTORY
II. THE FIRE SCENE INVESTIGATION
III. THE ALLEGED POSITIVE ANALYSIS FOR GASOLINE (THE JAR)
IV. THE EXCULPATORY NEGATIVE ANALYSIS FOR GASOLINE (THE CAN AND ITS SUPPRESSED CONTENTS)
V. THE AUTOPSY
VI. DURING THE FIRE
VII. THE SOOT AND THE SINGEING OF HAIR
VIII. THE FINGERNAIL SCRAPINGS
IX. THE WILL DRAFT
X. SONIA'S STATEMENT

I. PRE-FIRE HISTORY

ALLEGATION: The fires began shortly after Sonia moved in with the decedent. This allegation was made by the District Attorney in his briefs to the Court of Appeals and in his closing statement to the jury.

ANSWER: Sonia did not "move in" with Uncle Bill. She had lived with him off and on for many, many years and had lived at the address of the fire for at least the last several years. Uncle Bill and Sonia had a loving father-daughter relationship which originated in her childhood. The source of this information is Sonia's three grown children, her husband, her school-teacher friend (Loretta Scott) and a formal written statement by the decedent to the Fort Stockton police on 11/03/91. In Uncle Bill's hand-written will draft, composed by him a month before the fire, he wrote: "I love my Sonia she has helped me for many years."

ALLEGATION: Sonia conducted a campaign of harassment against Uncle Bill to terrorize him. In this scenario, Sonia was said to have started no less than three small fires prior to the one coinciding with the death.

ANSWER: No evidence was ever provided that Sonia started any fires. Although there is no doubt that there were two small fires back to back on 11/2/91, these were not unique events which were associated with Sonia's return from her mercy trip to care for her ailing husband and son. The decedent had a long history of prior fires, including the deliberate burning of an old house on his oil lease, a bout in the hospital from being burned while deliberately flaming a spray paint can and a fire in a plastic container in his office – all unrelated to Sonia. The 11/02 fire in his office was the second of two fires in that room, as should have been observed by fire investigators from the large hole it left in the middle of the carpet. The earlier fire was witnessed and extinguished by Sonia's husband, Billy Cacy.

The paint can and burned lease house incidents were confirmed by Sonia's grown children who were confidants of their "grandfather." The prosecution had to know about the lease house ("barn") fire from the beginning because Uncle Bill told the police about it in his interview:

> I had a barn out there that people kept messing with all the time. I always found signs and evidence that someone was going out there . Damned thing finally burned down.

Even the prosecution experts confirmed that Uncle Bill was a very careless smoker, lit his wall furnace with a propane torch and that every piece of his furniture had multiple cigarette burns.

ALLEGATION: Sonia stole her uncle's .22 pistol on or about 10/10/91 and secretly returned it to his office on the day of the two fires. This allegation apparently was used in support of the harassment theory.

ANSWER: When Sonia returned from her trip, Uncle Bill was showing strong signs of dementia. The Cacy sons report that Uncle Bill was carrying the gun in his pants pocket and claiming the somebody was out to get him. As evidence of the imagined plot he cited finding 13 dead birds in his yard. The old man apparently carried the pistol with him for protection against his imagined enemies. The truth of this story is bolstered by Uncle Bill's own words in his 11/2/91 interview with the police:

> (page 9) I kept that gun with me all the time and that day I looked for it and it wasn't there.

The fact that Uncle Bill was carrying of a gun in his own front yard when Sonia returned from Houston with her son was an indication of his pre-existing mental state in which he was convinced someone was out to get him. In his interview with the police, he told them the same thing he had told Sonia and her children on their arrival from Sonia's trip:

> (page 10) No! I just hope you find out what's going on because somebody is trying to kill us and we've been trying to tell you all that for quite some time now.

Uncle Bill himself found the gun lying under some household items on the bureau of his office while talking to the authorities on the day of the two fires. Although he perhaps shamefacedly claimed the thief had "brought it back," it should have been obvious to anyone that the old man was simply suffering from memory loss and paranoia, as was evident to his family.

It is important to note that eye-witness accounts of Uncle Bill's behavior on the day of Sonia's return show that his unfounded belief that someone was "out to get him" did not begin after her return as was repeatedly alleged in the trial.

II. THE FIRE SCENE INVESTIGATION

ALLEGATION: "Noting area burn patterns; glass crazing, smoke travel, position of victim, statements from police officers, firemen, neighbors, and Ms. Cacy, and two suspicious fires in the same house one week prior made this investigator to determine this fire cause to be arson." This quote is from the report of Frank Salvato. Written on the day of the fire, it is the earliest allegation of arson.

ANSWER: Salvato's leap to judgment was written on or about the day of the fire and long before the investigation had gathered vital information. Based on Salvato's use of the old wives tale holding crazed glass as an arson indicator, it is obvious that he was not qualified to offer an opinion. Crazing is caused by water being sprayed on hot glass, not by accelerants. The smoke patterns and other cited factors contained no information with respect to arson. It should be remembered that Mr. Salvato was responsible for the error of the fire department in failing to attempt to rescue the decedent in an attempt to preserve a supposed "crime scene." An allegation of arson prior to the gathering of all evidence sets a prejudicial atmosphere in which investigators may try to support the original allegation to protect their colleague.

ALLEGATION: **The burn patterns at the fire scene contained evidence of arson.**

ANSWER: The fire scene was exceptionally clean and undisturbed because of the bad judgment of the authorities in attempting to preserve evidence of supposed murder rather than rescue Uncle Bill. There were no pour patterns to suggest the use of an accelerant. Investigator Kenley in his testimony implied that a burned area under the cot was indicative of an accelerant. However, the burning cot was proved by prosecution experts to have melted and collapsed during the fire and this alone would account for the burned carpet. **Furthermore, Kenley failed to tell the jury that the cot mattresses were made of polyurethane foam, a material which has earned the title "solid gasoline." because of its similarity to gas in fueling hot, smoky, fast-burning fires.** In a fire, polyurethane melts and drops flaming liquid on any surface under it. Thus the only burn pattern on the carpet is adequately explained by natural and predictable phenomena.

ALLEGATION: **The burns to the decedent's body were the result of gasoline being poured on him and ignited.**

ANSWER: **The prosecution experts failed to determine the presence of heavy drapes across the window in the immediate vicinity of the body. These drapes would have caught fire at an early stage and dropped on and about the victim, producing widespread burns.** The body was initially fully clothed and the cloth would also have led to full-body burns. Finally, the body was also subject to prolonged radiation from the fire. The failure of the investigators to realize that there were curtains on the windows is inexcusable. The drape rod was still in place and the broad windows faced the street. The secondary nylon see-through curtain melted and imbedded itself in the area of the body and was easily observable if they had looked. There were and are pictures of the pre-fire room available and these clearly show the brown drapes identical to the surviving drapes in the other rooms.

These conclusions are based upon my on-site analysis as a fire investigator of the evidence at the fire scene, the photos and reports provided of the fire scene and the testimony from the two trials. The same evidence has also been similarly reviewed by fire investigator Ken Gibson, who independently reached the same conclusions. The photos, reports and testimony were also studied by a third qualified fire investigator, Gary Fye, who reached similar conclusions independently.

ALLEGATION: The charring of the rafters was greater above the body of the decedent, thus indicating the presence of an accelerant on his clothes. This allegation was made by fire investigator Kenley based on a photograph.

ANSWER: Although the rafters appear darker in the photograph, this is an illusion caused by the reflection of light off the shiny surface of the rafters farther from the body. Both I and Mr. Ken Gibson, an experienced fire investigator, examined the actual rafters carefully and reached the same conclusion that the entire rafter span away from the end walls is more or less uniformly charred. The charring over the body is no greater than elsewhere and is simply a product of hot gases from the room venting through the ceiling where a 12 foot section of sheetrock had been removed long prior to the fire as a result of rain damage.

ALLEGATION: **The fast, hot, smoky fire was an indication of the use of gasoline.**

ANSWER: The prosecution's heavy emphasis on the supposed fast, hot, smoky nature of the fire was based on the report of Steve Kenley, a part-time fire investigator, rancher, who was told by the pathologist, Dr. Bux, about what he believed was a positive gasoline analysis. Kenley's report is best described as an attempt to make the evidence fit the assumption of the presence of gasoline. Kenley wrote:

> The heat that caused this damage was gone, when the officers entered the house. They only had to deal with smoke. Had this heat, which caused the damage you see in these photographs, still been in the structure. The officers would not have been able to accomplish what they did. No, that heat had escaped out the vent. How can you have this searing heat and then have it diminish? There is only one answer for this. Something burned very hot and very fast in that room. So hot and so fast that the vent was unable to handle it. Then, what ever it was burned up.

Kenley's analysis is incorrect. It is based on what fire investigator refer to as "old wives tales." These myths are a form of junk science principles which have been thoroughly disproved by more recent research. A mattress or piece of padded furniture in a room can, on ignition, create such rapid flaming that the room will come to flashover conditions within three minutes. That is, the room can become so hot without any accelerant that every surface therein will burst into flame simultaneously. There was no flashover in the Richardson house because of the high level of ventilation.

Kenley made the classic fire investigation error of assuming that an accelerant is required to create a rapidly growing, smoky fire. Numerous cases and experiments over the last three decades have shown that ordinary furniture can create the same effect. The synthetic materials found throughout modern houses are petroleum based products which can create as much or more smoke and heat than a typical accelerant

Kenley is correct in assuming that the fire had diminished somewhat by the time the authorities arrived. However, he was dead wrong in assuming this transient higher fire was the result of accelerant which was present and became depleted.

The prosecution expert violated one of the first rules of fire investigation, which requires the elimination of all reasonable natural or accidental causes of a fire before reaching a conclusion of arson. What he neglected to take into account was the presence of flammable drapes at the window end of the room and a cot with two flammable polyurethane mattresses in the approximate center. The rubberized cloth curtains would have burned extremely rapidly and fallen on or about the body of Mr. Richardson. The cot mattresses were made of polyurethane foam, which the Los Angeles Times described as :

> "a deadly and pervasive peril" that has the properties of "**solid gasoline**."

The above quote is from an article entitled "SHOULD POLYURETHANE FOAM BE BANNED" in the May/June 1988 edition of the National Fire Protection Agency Fire Journal.

When Mr. Gibson and I investigated the fire scene in Fort Stockton in 1996, we quickly found small remnants of the polyurethane mattresses and ticking as well a surviving sample of the drape. We tested both and found them to be highly flammable. The plastic foam burned with a fast, hot, smoky flame as expected.

As an example of what is known about the fast, hot smoky fires generated by polyurethane furniture and mattresses one need only read a manufacturer's Material Safety Data Sheet such as G R Foam Products' flexible polyurethane foam MSDS, which warns in bold type:

> Unusual Fire And Explosion Hazards: PRODUCT MAY MELT,AFTER IGNITION, TO FORM FLAMMABLE LIQUID. BURNING PRODUCES INTENSE HEAT, SMOKE, TOXIC GAS.

In this straightforward manufacturer's warning lies the obvious and reasonable explanation for Mr. Kenley's fast, hot, smoky fire as well as the burned carpet under the cot. With the cited phenomena explained by materials native to the fire scene, it would be unconscionable to impute the fire behavior to an accelerant for which no evidence exists.

I called Mr. Kenley to ask him his reasons for not telling the jury about the flammable characteristics of the cot and the fact that it explains the fire fighters observations and the burn patterns. Mr. Kenley insisted to me that he had so informed the jury. However, close scrutiny of the record shows that he did no such thing.

It is ironical that in his long report to the District Attorney, Kenley mentioned that the cot mattress was "probably" made of polyurethane and he concedes that this substance burns fast, hot and smoky:

> Now we have to determine what was in that space to cause this damage. The cot? The mattress was probably made of polyurethane foam rubber. And polyurethane does burn rapidly. It does produce a very sooty smoke. It will produce a lot of heat, rapidly.

Why then did he not tell the jury that his fast, hot, smoky fire could be explained by the cot material in the absence of any accelerant? Not only did Kenley not inform the jury, but he also continued his report in such a way as to lead the reader away from the subject. Mr. Kenley proceeded to assume a fact not in evidence, the prosecution's theory that Mr. Richardson was asleep when the fire began. He further reasoned that if he was asleep, he would have had smoke in his lungs from the burning of the cot. From this limited perspective he then jumps to the illogical and contrived question:

> "The real question is, was smoking in bed the cause of this fire?"

This is not "the real" question in the context in which he introduced the cot. The real question is implied in his original introductory statement before he leads the reader astray:

> Now we have to determine what was in that space to cause this damage. The cot?

The answer which is obvious from Kenley's own description is an unqualified "yes." The cot mattresses were not just "probably" made of polyurethane, they were certainly made of this material and there were two of them, not one. It is incredible that the state had three arson investigators at the scene of the fire and yet managed to overlook the bits of both mattresses which survived.

Despite his belief that the cot mattress was "probably" made of polyurethane, which is well-known by fire investigators to form a flaming liquid, Mr. Kenley told the jury that the burn under the cot was the result of an accelerant:

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THE STATE: Q. And in your investigation, do you have an opinion as to how that high heat level got to the floor?

A. It usually indicates a flammable liquid or accelerant.

It is not just the mattresses that State's experts chose to overlook but also the drapes. The latter account for the charring of the rafters directly above them without the need to speculate about hypothetical gasoline on the body of the victim.

The fault of Kenley in not informing the jury about the existence of the polyurethane mattresses and the burning properties of the material was exacerbated by the absence at the trial of a defense fire investigation expert. Sonia's only "expert" was the fireman, Dangerfield, who was not qualified to handle questions related to combustion properties of materials. The only mention of polyurethane in the trial was in the direct examination of Mr. Dangerfield, who apparently knew the cot mattress was polyurethane but assumed erroneously that it burned slowly as is shown by his testimony:

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we know that he didn't keep hours like some people do. We know that, or in the scenario used by the State, that perhaps this is where the fire originated, that in this bedroom there was the Defendant, my client, Sonia, that there was a sheet there and underneath the sheet there was some kind of material that burns slowly, polyurethane?

A. Some kind of polyurethane foam.

Had a qualified fire investigation expert been available at trial, (s)he would have pounced on the subject of polyurethane to tell the jury what Kenley did not, that it burns like "solid gasoline" and drops flaming liquid which leaves burn patterns on carpet.

This was not a complicated fire scene. It was mistakenly interpreted by investigators who spent too much effort trying to fit the evidence into a murder theory which was formed before the scene cooled. The overlooking of the drapes and the contrived "search' for an accelerant to fit the description of a fast, hot smoky fuel load while ignoring the simple physical clues left in the wake of the fire is inexcusable.

Had Sonia been provided access to the services of a moderately competent fire cause and origin expert, the case would have probably had a different outcome.

III. THE ALLEGED POSITIVE ANALYSIS FOR GASOLINE (THE JAR)

ALLEGATION: **An analysis of the clothing remnants from the body indicated the presence of gasoline. This allegation of the presence of an accelerant was the cornerstone of the prosecution's case.** Both the chief fire investigator, Kenley, and the medical examiner, Dr. Bux, were strongly influenced by the alleged finding of gasoline. The influence was both direct and indirect on the medical examiner, who also relied on the local investigation which had been influenced the analysis.

ANSWER: **The interpretation of the GC-MS data from the clothing remnants was simply incorrect.** I personally reviewed the prosecution's gas chromatograms in March 1966 and noted that they showed only the numerous hydrocarbon compounds that are produced by the thermal decomposition (pyrolysis) of synthetic materials common to fire scenes in general and the Richardson house in particular.. In order to verify my conclusions I later forwarded copies of these chromatograms to numerous leading specialists in fire debris analysis.

The original data print-outs have been reinterpreted by a large number of the most reputable analysts in the United States, Canada and Australia. **The experts are unanimous in their opinion that the chromatograms relied on for the analysis do not show the presence of gasoline or any other class II accelerant. Included among these experts are Dr. Richard Henderson of Southeastern Research Labs, who teaches arson debris analysis at the FBI,** Dr. Wolfgang Bertsch, who teaches the subject at the University of Alabama, John Lynch of Atomus, Brian Dixon of the Canadian Forensic Science Center in Toronto, Tony Cafe of T.C. Forensic, an arson debris laboratory in Australia and Andy Armstrong of Armstrong Forensic Labs in Dallas.

In addition, the opinion of the preceding experts has been confirmed independently by numerous experts chosen by the Wall Street Journal and separately by ABC News. I know of no case in the history of arson debris analysis which has undergone the extensive scrutiny of evidence applied to this single sample. The list should also include John Lentini of ATS, who initially stated to the press that he "would not argue with the analysis knowing they had done a lot more work." The fact is that the Bexar County Forensic Science Center, where the original sample was allegedly analyzed, did not do any additional work and Mr. Lentini is now a supporter of Sonia's case.

Unfortunately for the jury and Sonia, there were no forensic scientists available at the time of her trial to tell the jury the truth; that the GC-MS data show absolutely no presence of gasoline. Not only were no such qualified experts available to her, but her court-appointed attorney, Tony Chavez, never requested funds for the use of such experts.

It is incredible that Mr. Chavez did not and does not understand the critical role that experts play in a case of this nature. In a 1996 interview, Mr. Chavez misinformed *The Wall Street Journal* that such experts were not necessary in the case. This unacceptable attitude for a defense attorney led Chavez to blindly accept the unrebutted finding of gasoline by the prosecution expert. In his closing statement, Mr. Chavez demonstrated his naive acceptance of the bogus analysis to the jury in these words (emphasis mine):

32

They put on Joe Castorena, a nice, intelligent man who tells about the testing that they, this jar that they sent the stuff from Dr. Bux. We don't know what part of clothing it was, they didn't tell us. We don't know where it came from because he didn't tell us, on the body. Just in a jar, we take it across the hallway. And he tests it. **And he says that there is evidence of class II accelerants from that particular part. I have no quarrel with that, I have no quarrel with that.**

In these few words, the defense attorney not only erred egregiously in accepting an incorrect analysis but revealed a total ignorance of the nature of the sample and the absence of admissible chain of custody documentation. Even an expert of moderate ability would have prevented these three errors which cost the attorney his case and the defendant her freedom.

ALLEGATION: **Joe Castorena, the Bexar County Arson debris analyst is an expert in the area of determining the presence of accelerants.**

ANSWER: **Mr. Castorena is a drug analyst with little or no formal training in arson debris analysis as is shown by his professional resume.** Bexar did only a relatively low number of analyses of fire debris for a few years and most of the analyses was done by an individual named Brian Cho, who was not allowed to testify. According to Dr. Larry Ytuarte, an ex-employee of Bexar, it was common practice at the laboratory for Brian Cho to place Castorena's name on the analyses so that Castorena could testify at trial as the analyst. Castorena's lack of expertise was demonstrated in the 1996 resentencing trial when he testified about the components of gasoline used to identify gasoline. His list of components were not those specified in the BATF standard on which he purported to rely and were not accepted markers for gasoline.

ALLEGATION: Joe Castorena conducted the analysis of the decedent's clothing remnants.

ANSWER: Although Joe Castorena testified that he had run the analysis, he admitted in the 1996 resentencing trial that it had actually been performed by Robert Rodriguez, who works at the same laboratory.

IV. THE EXCULPATORY NEGATIVE ANALYSIS FOR GASOLINE (THE CAN AND ITS SUPPRESSED CONTENTS)

ALLEGATION: The clothing remnants from the decedent's body were placed in a Mason jar by the medical examiner, Dr. Bux and transferred to Joe Castorena for analysis on 11/15/91. The analysis was positive for class II accelerant (gasoline).

ANSWER: **Dr. Bux placed the clothing in a signed and dated can and the sample was sent to AID in Dallas for analysis. The analysis was NEGATIVE for gasoline and all other accelerants. The can was discovered by myself in a Fort Stockton police evidence storage room in March 1966. It contained remnants of Fruit of the Loom shorts and a pants waist band, the same contents as the jar purportedly analyzed by Castorena.** The lid of the can bore the date of the autopsy, the signature of Dr. Bux and the correct case number. The can lid data conformed precisely to the description of a container analyzed by AID in Dallas in December 1991 and found to be free of accelerant. The authenticity of the can was verified by Dr. Bux's testimony in an unrelated case in which he identified his handwriting on the lid and the nature of the contents as clothing from an autopsy. **This highly exculpatory evidence was unknown to the jury which convicted Sonia.**

ALLEGATION: The contents of the can from the autopsy tested negative because of a prior analysis by Bexar in which the gasoline had been stripped. This allegation was made by the District Attorney in the form of a hypothetical question to the president of AID. It disingenuously led the jury and the defense to believe the can had no exculpatory value

ANSWER: There was no prior test of the can. This was a prosecution red herring. The District Attorney has admitted publicly to the San Antonio Express-News (7/1/96, page 8A) that the alleged prior analysis was an error on his part:

> Valadez said comments he made at trial, implying that the Dallas laboratory tested a clothing sample that had already been tested in Bexar County – and thus been depleted of hydrocarbons – were incorrect and unintentional.

ALLEGATION: There is documentary evidence of the transfer of the clothing remnants in a Mason jar from the pathologist, Dr. Bux to Joe Castorena on 11/15/91.

ANSWER: Castorena admitted in the 1996 trial that the so-called chain of custody documents were created 14 months after the alleged transfer took place and that he back-dated the documents. The documents are worthless as proof of chain of custody. The evidence would have been inadmissible if the court had been told the truth by Castorena in the original trial.

The only evidence in the Bexar laboratory files which mentioned a Mason jar of clothing remnants was State's exhibit 69 in the 1991 trial. This two-page document reported the transfer of the jar from the medical examiner to the analytical laboratory on 11/14/92 where it was purportedly received by Joe Castorena. It went unnoticed in the first trial that the date was one year later than the autopsy. When this discrepancy was pointed out to the prosecution by myself, the prosecution delivered a new document with the same content but labeled "CORRECTED" and bearing the date 11/14/91. The latter document was entered as State's exhibit 6A in the resentencing trial.

When Castorena was questioned in the 1996 trial about why the original date was incorrect he explained that he had typed the first misdated chain of custody report on January 20, 1993 and made an error in backdating it to the time of alleged transfer. In addition to the year suffix "-91" mentioned in the following 1996 testimony, the document was also backdated with the full date "November 14, 1991":

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Q What we are looking at is State's 6A, a document entitled "Corrected Copy", don't we?
A Yes.
Q Can you explain to the jury why this document was corrected?
A Yes, because on first typing and... and I typed this report, I made an error and I typed medical examiners number 1578-92.
Q When did you type that report that you used 92?
A I typed it... I was asked to write a formal report in January the 20th, 1993.
Q So on January 20th of '93 you were asked to type a

15 formal report?
16 A Yes. As opposed to the routine report we normally give
17 the medical examiner.

What Castorena euphemistically refers to as "a formal report" is apparently a document specially prepared for the original trial about a month in advance. Thus Castorena's chain of possession document is simply a prop to be used in court as if it were a regular business record contemporaneous with the actual alleged transfer.

The term "formal report" implies that there is some less formal document in existence which contains the same information in a less formal form. This is not the case. The court and the defense were allegedly provided with all the contents of the laboratory's file and there is no such document.

Based on the absence of real, contemporaneous chain of possession documentation for the Mason jar, the evidence of the alleged results of its analysis should not have been admissible at trial.

ALLEGATION: The jar is properly labeled as having been prepared by Dr. Bux.

ANSWER: The Can is properly labeled in every respect but the jar is not. The jar is undated, does not bear the name of anybody in Medical Examiner's laboratory and is labeled with an improper case number without a suffix. It appears to have been created by someone unfamiliar with standard operating procedures at Bexar.

ALLEGATION: The can sample was created by transferring material from the jar. This allegation would be consistent with the District Attorney's misleading suggestion to the jury that the can material had been "previously analyzed."

ANSWER: The jar is full and thus nothing was removed. In addition, Castorena testified that they do not remove lids at Bexar as a matter of procedure to assure that no volatiles are lost. Castorena also testified that the jar was sealed with evidence tape after analysis and had been kept under his control at all times. If such a transfer had been made the two containers would have given similar analytical results, which they did not. Such a transfer would require documentation in order for the jar results to be used as evidence. There is no such documentation.

ALLEGATION: The Jar sample was created by transferring material from the can to the jar by "somebody in the lab." in order to adapt it to the Bexar analytical apparatus. This allegation was made by Tim Fallon, Chief of Physical Evidence at the Bexar County Forensic Science Center, to the San Antonio Express-News (May 8 1996, page 8B):

> The misdating of forensic reports is simply carelessness, said Tim Fallon, chief of physical evidence, who said there is also a reasonable explanation for the two containers of evidence.

He said that during the autopsy, Dr. Bux collected and placed it in a metal can. The sample was sent to a lab chemist who then put part of it in a jar which was compatible with their gas chromatography testing equipment.

ANSWER: I called Mr. Fallon to ask him the source of this information and he conceded that it was mere speculation on his part. He added that there is no documentation of such a transfer nor is there a witness thereto. It should be noted that cans are compatible with the Bexar labs apparatus and that they analyzed numerous other can samples in this same case. If such a transfer had been made, the analyses of the two samples should have given the same general results, which they did not.

The analysis of such a sample (the jar), created without documentation, would be inadmissible as evidence. The fact that the jar sample was rich in plastic pyrolizates (thermal degradation products from plastic) but the can showed only nine significant peaks in the chromatogram would be proof of contamination of the jar sample (either accidentally or deliberately) if the material had been transferred.

It should also be noted here that no blank analysis was run on the jar and that pyrolizates may have been absorbed in the plastic lid seal. The Canadian Forensic Science Center has reported multiple occurrences of false positives resulting from lids contaminated in transport to the lab by ambient hydrocarbons in the trunk of the transporting vehicle.

ALLEGATION: **The State's arson debris analyst was unaware of the nature or disposition of the exculpatory can sample.**

ANSWER: Joe Castorena did not speak the truth when he was asked about other evidence which had been submitted for testing: In these two excerpts from his testimony he fails to tell the jury about the exculpatory can of clothing remnants.

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Q. Are these the only things that were submitted to
you for testing from this particular --
A. I believe there were some -- some other clothing
material or other items for accelerants but we returned
those, I mailed them off. We -- we didn't test them.

205

Q. Now, I have here that you also tested a one
gallon-sized can containing three coffee cups, one
gallon-sized can containing two bed sheets, one
quart-sized can containing one pair of gloves and one
quart-sized can containing two pillow cases for

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accelerants?

A. No, we -- we didn't do any accelerants. Those are the ones I was telling you -- talking about earlier. They were submitted to the laboratory. Since we couldn't do the type of testing that was being requested, we -- we just never did any testing.

Mr. Castorena not only knew about the can but he also knew the exact contents, remnants of undershorts and a pants waist band, the same exact materials he could see through the transparent glass of the Mason jar. Furthermore, he knew that the material was to be shipped to AID for analysis because he is the person who arranged for that shipment. **The proof of these statements is a handwritten letter draft by Mr. Castorena** originally intended to accompany the can to AID. The letter was never typed and the can ended up being sent to AID without documentation but preceded by a call from Mr. Castorena to AID in which he described the labeling on the can in the same words used in the letter. This letter was not kept in the laboratory file but in a separate location and was not presented to the court in either the original or resentencing trial. The withholding of such critical exculpatory evidence is clearly unacceptable. The following is a transcription of the contents of Mr. Castorena's 12/9/91 letter which was withheld from the court (emphasis mine):

> As per our conversation of todays date, I am sending you the remainder of the **undergarments on case ME1578-91** as requested by officer Jerry Joplin, Fort Stockton. If you have any questions regarding the samples, please contact Dr. Robert Bux at (512) 225-2918. Sincerely, (signed) J. L. Castorena

Mr. Castorena's ongoing attempt to deny knowledge of the identity of the contents or disposition of the can containing Bill Richardson's undergarments is underscored by his testimony in the 1996 resentencing trial (emphasis mine):

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Q What was sent to Dallas to be tested by AID Laboratories?
A Apparently, these were other samples that were submitted to the laboratory by the law enforcement personnel.
Q All right, would you read the paragraph in the letter. Next to the last paragraph, read it out loud, please?
A "Later, we received a single metal container identified as ME1578-91 and below that is the date -- it's the date 11-11-91, Dr. Bux. It was requested that we analyze material contained within this container and identify, if possible, any hydrocarbon residues that might be recovered.
Q Okay, some other clothes from the body went from Dr.

Bux to AID Laboratory?
A Apparently so, I don't know what went over there. I can't answer that.
Q Look in your file and find where the other clothes, not these clothes in the mason jar were taken off the body and put in another container?
A I don't have anything in the laboratory file.

Mr. Castorena clearly did not tell the jury the truth in either the original trial or the resentencing trial.

The quality of the arson debris analysis and related record keeping in this case was egregious. If Sonia had been provided with competent expert help in the beginning, she could have effectively rebutted the State's erroneous scientific conclusions. In the absence of a competent expert there was no possible chance for the defense to expose the many errors in evidence handling and interpretation.

V. THE AUTOPSY

ALLEGATION: **The autopsy by Dr. Bux showed independent evidence of the cause of death as thermal burns and the manner of death as homicide.**

ANSWER: Dr. Bux's conclusions were based on the erroneous analysis for gasoline and to a greater extent on the erroneous conclusions of the local fire investigators who were also led astray by the bogus analysis. **Three respected forensic medical examiners, Dr. R. K. Wright of the University of Miami Medical School, Dr. Scott Denton, Deputy Medical examiner of Cook county, Illinois and Dr. Ed Friedlander of the American Health University in Kansas City, have studied the work of Dr. Bux and they all concur that the autopsy evidence indicates that the decedent died of a heart attack**, probably while fighting the accidental fire he had started, and his body was burned after death. This scenario is completely incompatible with the prosecution theory that the death occurred as a result of being ignited while asleep. The three medical examiner reports speak for themselves. However, even a layman can understand that the absence of soot in the lungs and trachea of the decedent is a strong indicator that he was not breathing while being burned.

It is important to note that Sonia did not have a medical expert at trial and could thus not rebut the erroneous conclusions reached by the prosecution pathologist. Had Sonia been given adequate access to an expert in forensic pathology and other relevant technical areas, the outcome of the trial would probably have been an acquittal. One of the forensic pathologists now offering pro bono help to Sonia (Dr. Wright) is also an experienced fire investigator.

ALLEGATION: Sonia poured gasoline on Uncle Bill while he was sleeping on the cot.

ANSWER: The evidence strongly indicates that the decedent was not asleep at the time of the fire. All of the family members state that Uncle Bill had poorly-fitting, painful dentures which he wore only to eat. At all other times, except very rare occasions when he had special company, the old man left his painful teeth out . He never slept with them in because of the extreme discomfort. The fire occurred at 6:30 A.M. and at that time there was toast in the toaster and the coffee pot was plugged in. These simple facts are strong indicators that Uncle Bill was awake and preparing to eat when the fire broke out. This was a small fire which did not block any exits. Uncle Bill could have simply walked out the back door or climbed out a window unless he was incapacitated. Since there was no physical trauma to his body other than the burns, it follows that he was dead or unconscious from natural causes before the flames attacked his body.

VI. DURING THE FIRE

ALLEGATION: Sonia did not call in the fire.

ANSWER: Sonia did call in the fire. Two police officers, including the officer who was on telephone duty, issued sworn search warrant affidavits in which they stated that she called in the fire.

ALLEGATION: Sonia struggled with the police in an effort to reenter the house to save her uncle.

ANSWER: The allegation is true. Sonia did try to save her uncle and she did curse the police for restraining her. However, Sonia's actions were not improper under the circumstances. The police and firemen made no attempt to rescue Uncle Bill, although they only surmised that he was dead. Instead of bringing the old man out, they treated the fire area as a crime scene from the moment of arrival and concentrated on preserving evidence rather than saving a life. The testimony of Officer Carreon in 1996 proves they did not know Uncle Bill was dead:

21

Q All right, she wants to get back in the house because she's worried about Uncle Bill; is that what she told

22

you?
A Yes, sir.
Q And you had been in the house?
A Yes, sir.
Q And you knew he was dead or probably thought he was dead?
A I didn't know he was dead.
Q But you didn't think you needed to try and bring him out?
A I didn't try because he was motionless at the time.

11 Q So he's probably dead, right?
12 A Yes, sir.
13 Q Did you tell Sonia this?
14 A No, sir.

Officers Carreon and Villesca had crawled into the burning room up to about 10 feet from Uncle Bill and had observed his form from floor level on their bellies, using their flashlights to peer through the haze of smoke. Then they took Chief Jackson in for a similar view. Immediately thereafter the town fire marshal, Salvato took over the scene from Jackson and ordered everyone to stay away from the body he assumed was dead. Salvato apparently inferred from Carreon's remark, "I didn't think there was anything I could do for him," that Carreon KNEW Uncle Bill was dead. **Salvato's testimony in the original trial is chilling as it describes a scene in which the assumption of death is made without anybody approaching the body for ten hours:**

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16 Q. Did anybody go up there and see if the
17 individual was alive, up close, like within minutes?
18 A. I don't know what all the officers did but what
19 I understand from their statements they did not. When I
20 arrived nine minutes, they did not. The gentlemen was
21 deceased. In my mind.
22 Q. From what you tell me, officers, through the
23 thick of smoke from over here, were making determinations
24 that this individual had died, not getting up close and
25 seeing him. They had no way of knowing from that how

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1 burnt he was or anything else, could they?
2 A. I can't answer that.
3 Q. Could you?
4 A. When I arrived, the smoke was in the room but
5 when I looked at the victim he was deceased.
6 Q. From over here?
7 A. Yes, sir.
8. From ten feet away?
9 A. Yes, sir. It was obvious.
10 Q. And no one, until 4:00 in the afternoon, not a
11 medical examiner, no one, got up from when they got there
12 two minutes after until 4:00 o'clock in the afternoon,
13 nobody got up there to see if he was breathing?
14 A. The justice of the peace was called.
15 Q. Did he go up to the body?
16 A. Not that I'm aware of, sir, but he did declare
17 him dead.

The reference to "when I looked" on line 5 above refers to a later time when the smoke had cleared. When Salvato arrived and took over the scene he could not have seen the body because the smoke he refers to in line four was completely opaque except from floor level. Salvato never entered the room on his belly as Carreon had.

In light of this incredible testimony it is not difficult to understand why Sonia cursed them for not bringing her uncle out of the smoke and why she continued to struggle with them to enter the house to save the old man.

ALLEGATION: Sonia was drunk the morning of the fire. This allegation was made by innuendo and repeatedly invoked in the District Attorney's closing statement.

ANSWER: Some witnesses believed they smelled alcohol on Sonia's breath; some did not. Those who smelled the alcohol were possibly correct because Sonia freely admitted having had a couple of drinks before she went to bed the night before. However, the analysis of her blood showed no alcohol and the policemen and fireman, who are skilled in observing symptoms of excess alcohol, reported no evidence of inebriation.

The District Attorney used the classic "Do you still beat your wife, yes or no" technique to establish in the jury's mind that Sonia was drunk. Although no witness ever testified to her being inebriated, he asked the following question to the Victim Aid officer, Betsy Spencer, who had spent much more time in close contact with Sonia than any other official:

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Q. Did she still appear to be drunk then?
A. No.

By contrast, Spencer's earlier testimony had been that she could NOT conclude that Sonia was drunk and, further, that she smelled NO alcohol:

42

Q. So, if she was that drunk, then, she wasn't functioning with her normal mental faculties, right?
A. If in fact she was drunk, you know. I couldn't make that determination. I'm only saying what could have been, I can't say that she was.

Q. And do you recall smelling any alcohol?
A. No, I don't.
Q. Did she appear to be -- well, let me ask you this. Are your familiar with the smell of alcohol on people that have been drinking?
A. Yes.
Q. And did she appear to be intoxicated, did she appear to be drunk?

43

A. I don't know whether any of it was alcohol related or if it was all just being upset because of the fire.
Q. But you did not smell, strong odor of alcohol on her?
A. No.

The prosecution also tried to establish that Sonia was drunk through her neighbor, Dois Clawson, who had wrestled with Sonia and been in contact with her from the time she escaped from the house to her ordeal in the hospital:

24

Q. When you came in contact with this Defendant, Ms. Clawson, did you ever smell anything an her that was unusual to you?
A. No, sir.
Q. Did you smell anything on her breath?

25

A. No, I did not notice anything.

42

Q. And did she appear to be intoxicated, did she appear to be drunk?

43

A. I don't know whether any of it was alcohol related or if it was all Just being upset because of the fire.
Q. But you did not smell, strong odor of alcohol on her?
A. No.
Q. Now, from what you witnessed, would you say that she was hysterical? Would that be fair?
A. Close to it.

Again the prosecution tried to establish drunkenness through Officer Kurtis, who had wrestled with Sonia twice and escorted her to the neighbors house:

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Q. Right. You made those two attempts after

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subduing her and you couldn't get in and then the officers

arrived, you never tried it again? Okay.
I believe you testified but I'm not sure, did you testify that you did not smell alcohol?
A. I never ---
Q. How close were you to her?
A. How close, to one person who was struggling.
Q. You were close to her then? In your many years of being a police officer, have you dealt with people that had been drinking and smell of alcohol?
A. Yes, sir, I have.
Q. Did she appear to be intoxicated?
A. I didn't pay attention to her if she was or not.
Q. It doesn't say anywhere in your report, so it's not anything that you noticed?
A. I was more concerned to keep her from going in the house.

Although the District Attorney cut off Officer Kurtis's testimony in line 5, it is obvious that the policeman did not smell alcohol or observe symptoms indicating inebriation.

The person who spent the most time in close proximity to Sonia on the morning of the fire was Ms. Loretta Scott, a Fort Stockton school teacher. Ms Scott also testified that she smelled no alcohol in face to face conversation with Sonia:

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Q. Well, were you looking at her face to face?
A. Yes.
Q. You were looking at you her face to face when she asked you about Uncle Bill
A. Yes.
Q. So did you smelled the alcohol on her breath?
A. I did not.
Q. You did not?
A. I did not smell any alcohol that morning, no, I didn't.
Q. So then, you saw the singed hair on her head?
A. I did not see any singed hair.
Q. So then, you saw the smoke on her face and around her nostrils and around her mouth?
A. I saw some soot, yes.
Q. You saw soot?
A. Smoke, yes.
Q. Where did you see that soot and smoke?
A. On her face and her hands.

Q. Show the jury where on her face you saw it?
A. Just some splotches around here.
Q. And now you're telling the jury you were within just inches of her face?

170

A. Yes.
Q. She's talking to you, telling you how worried she is about Uncle Bill?
A. Yes.
Q. And you don't have a loss of the sense of smell, do you?
A. No.
Q. But you can't smell the alcohol?
A. No.
Q. Are you saying there wasn't any or you didn't smell any?
A. I didn't spell [smell] any.
Q. And
A. The only thing I smelled on her was smoke.
Q. And if Dr. Talley testified there was a smell of alcohol on her breath, would you argue with that?
A. I didn't smell it.

The final question and answer above explain the long treatment in this report of the evidence concerning Sonia's state of sobriety on the morning of the fire. The issue assumes importance because of the attention given to it by the Court of Appeals in their judgment rendered on May 18, 1995. On this subject, the Court relied on facts not in evidence in Pages 4, 5 [emphasis mine]:

> On this occasion, Officer Villesca noticed the **strong** odor of alcohol about the appellant. **Spencer** and Officer Carreon also smelled alcohol about the applicant....
>
> ....**Medical personnel** at the hospital confirmed other's observations that appellant's hair was singed and that she had soot-like marks about her nose and lips, further, that she smelled of alcohol.

Contrary to the judges information, Officer Villesca (and his partner, Carreon) said nothing about the alcohol aroma being "strong". Betsy Spencer testified that she did NOT smell alcohol despite close proximity to Sonia. A more important error lies in the statement that medical personnel smelled alcohol. This idea is apparently based on the District Attorney's misleading hypothetical statement in lines 15-16 above that there was testimony by Dr. Talley concerning the smell of alcohol. In fact, Dr. Talley was at a medical conference in Dallas at the time of trial and never appeared in court at all. None of the medical personnel testifying at the trial (nurses Saavedra, Parish and McGee or Dr. Young) were ever asked any questions relating to the smell of alcohol.

Of the six people who testified at trial that they came in close contact with Sonia on the morning of the fire, only the police partners Villesca and Carreon, who had both choked to the point of illness on smoke, said that they smelled alcohol. Neither of these two said the smell was strong or implied that Sonia was inebriated. All of the remaining four, Spencer, Clawson, Kurtis and Scott denied smelling alcohol. On balance, the evidence supports a finding that any alcoholic aroma on her breath was relatively mild – perceptible by some but not others. This observation comports with Sonia's claim that she had imbibed a few drinks before going to bed but was sober at the time of the early morning fire.

VII. THE SOOT AND SINGEING OF HAIR

ALLEGATION: Sonia was covered with soot at the fire scene as a result of the fire ball created when she poured gasoline on the decedent and ignited it with a tossed match. This allegation was used as direct evidence of arson before the jury.

ANSWER #1: This allegation is based on junk science or Saturday morning cartoon scenes. Freshly poured gasoline in cool weather does not produce a fire ball. Furthermore, the flames of a gasoline fire will not cover one in soot. Experimental verification of this principle is a simple task. Waving the hands over a gasoline fire, without severely burning them, does not deposit visible soot. Except in cases of prolonged exposure to smoke, soot on a person's body comes from contact with walls or floors at a fire scene or through contact with someone who has touched sooty surfaces.

A flash fire can occur in situations where gasoline is poured and allowed to vaporize into the air over a period of time. Some might refer to this as a "fire ball." There clearly was no flash fire involving Sonia because such an occurrence would have melted her nylon pajamas and burned her skin but would not have deposited a significant amount of soot on her person.

ANSWER #2 Sonia's clothing, which was reportedly covered with soot, was not actually hers. She was wearing a Mexican house dress furnished by the neighbor Dois Clawson after she exited the burning house. It was that dress that became sooty. Obviously, the soot was deposited after Sonia had escaped from the fire.

ANSWER #3 It was pitch black at the fire scene. The only people who had an opportunity to observe Sonia closely in a lighted space were the neighbor Dois Clawson and the Victim Aid officer, Betsy Spencer. Ms. Spencer's testimony shows that initially, when she first saw Sonia in the neighbor's house, Sonia had only three local soot streaks on her face.

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22 Q. Well, let me rephrase that question. Did you
23 look at the Defendant once you were inside Ms. Bischoff's
24 home?
25 A. Yes, yes, I was very close to her.

Q. What did you notice?
A. I noticed that she had singed hair and she had black under her lips, under her nose and on her lips. I gave her some Carmex. I thought her lips looked dry and uncomfortable.

ANSWER #4 Dois Clawson, the neighbor who was never in the burning house, was also covered with soot from a source other than direct exposure from the fire. The original source of the soot was the three policemen (Carreon, Villesca, Kurtis) who had each acquired it on their hands and clothing on crawling into the house and subsequently struggled with Sonia thus transferring it to her. Clawson was also involved in the struggles and also became sooty as a result.

ALLEGATION: **The top of Sonia's hair was singed by a fire ball rising from the decedent's body and bouncing or "coming back down" from the ceiling.**

ANSWER: **This is an example of junk science. Freshly poured gasoline does not produce a fire ball. Had there been a fireball, Sonia would have been burned and her nylon garment would have been melted. Fire balls do not bounce or "come back down."** The flames from gasoline in a room form a thin jet which spreads across the ceiling in a layer which slowly increases in thickness with time. Sonia's singed hair was a result of her attempt to go over Officer Kurtis when he was entering the house on hands and knees. Kurtis observed flames coming out of the upper area of the doorway. It is a common occurrence for people to singe their hair on attempting to enter a room in which fire is present. Hair singeing under the same circumstances of trying to enter a flaming room also occurred in my most recent case and similar scenarios are well-documented in numerous other cases.

VIII. THE FINGERNAIL SCRAPINGS

ALLEGATION: Sonia chewed off her fingernails to thwart the analysis for evidence of murder. This pointless allegation was strongly emphasized at trial as an act of destruction of incriminating evidence.

ANSWER: Of all the allegations made against Sonia, the chewing of her fingernails appears to be the most irrelevant given the evolution of the case. Immediately after the fire, the authorities formed the provably incorrect theory that there had been a physical struggle between Sonia and Uncle Bill. The evidence, which they thought led to this conclusion, was a cot they assumed had been broken in a struggle, blood on a curtain and window sill they assumed was Uncle Bill's, and a will draft they assumed was a forgery. In order to prove this theory they wanted to find Uncle Bill's blood or tissue under Sonia's fingernails.

It was Officer Carreon, one of the policemen who had struggled with Sonia at the pitch black fire scene, who obtained the search warrant to scrape Sonia's fingernails at the hospital. Carreon had no way of knowing that Sonia has been a compulsive fingernail biter since childhood and that she has always had nails which were chewed to the quick. This fact is readily available from any of Sonia's family and friends.

When Carreon arrived at the hospital with his search warrant and a nurse, he found that Sonia's nails were bitten to the quick, but he believed he had observed longer nails earlier in the day. His observation was shared by no other witnesses, not even the women, who some believe would more likely make such an observation. Carreon decided that Sonia had bitten her nails in an attempt to hide evidence of a fight with Uncle Bill. He was obviously still working under the hypothesis that there had been a struggle which spilled Uncle Bill's blood.

Subsequent investigation by the prosecution's own experts led them to completely abandon the struggle scenario and adopt the theory they presented to the jury. Under the new theory, backed by all their subsequent evidence, there was no struggle, the cot was melted, not broken, and the blood was from rosebush scratches on Sonia's leg. There was no blood from Uncle Bill in any sample . Furthermore, the autopsy showed no physical trauma to his body other than burns and heart attack symptoms. The story they told to the jury and backed by testimony from their experts was that Sonia tiptoed up to her sleeping uncle, poured gasoline on him, stepped back to avoid being burned and tossed a match.

In the absence of an alleged physical struggle, the presence of Uncle Bill's DNA under her fingernails would have meant nothing. Living in the same house with him would have provided plenty of sources of Richardson DNA. There was obviously no Richardson blood on her hands because there was no evidence of his having bled.

Under these circumstances, the allegation of Sonia biting her fingernails had absolutely no relationship to the alleged crime and should have been ignored by the prosecution. Instead the prosecution apparently saw an opportunity to influence the jury by illogical innuendo and therefore devoted a great deal of effort in court to convince the jury that Sonia's fingernail biting had a dark motive. The prosecution even called as a witness the special nurse who scraped Sonia's nails to testify to their shortness.

VIII. THE WILL DRAFT

ALLEGATION: Sonia lied to the police in stating that her uncle did not have a will. This claim was attributed to her in a formal but unsigned written statement at police headquarters on 11/2/91, about a week before the fire.

ANSWER: Approximately a month prior to the fire, the decedent had a premonition of death, apparently based on his failing health and mind. He scrawled out a draft of a will on a sheet of paper and an envelope, put it in the envelope with a do-it-yourself will kit and asked Sonia to fill out the formal will. She did not do so. The District Attorney showed the jury only the portion of the will on the paper sheet but not the portion of the will draft on the envelope. He also did not

introduce the will kit. The writing on the envelope said, "I love my SONIA she has helped me for many years.". Thus the prosecution withheld the exculpatory part of the draft which established the relationship between the decedent and the lengthy association.

Deleting the will kit kept the jury from knowing that Sonia and the decedent might consider the draft as less than a legal will. On 11/02/91 Fire chief Jackson visited the decedent and Sonia and asked if the old man had a will. Uncle Bill answered, "No." On 11/03/95, Frank Salvato asked Uncle Bill the same question in a formal interview at police headquarters and he again answered, "No." Within a short time thereafter in the same interview session, the police asked Sonia if her uncle had a will. Her purported answer, "No, not as far as I know" was entirely proper under the circumstances of her uncle having similarly answered the same question and knowing that she had not filled out the will form as he had requested.

ALLEGATION: **Sonia had a motive to kill Uncle Bill because of the will.** This allegation was made by the District Attorney in closing and in his appeal briefs and repeated by the Court of Appeals. The earliest allegation was by State Deputy Fire Marshal Killingsworth in the conclusion of his early report three days after the fire.

ANSWER: Like his fellow investigator Frank Salvato, Killingsworth expressed his opinion before receiving all the available evidence. Because of his senior position, his leap to judgment probably had even more prejudicial effect on the future investigation than that of Salvato.

The will draft could not have been a motive for burning the house and murdering the decedent because the estate of Uncle bill was worthless. His assets were less than it took to bury him. Sonia was well aware of Bills' financial situation because she maintained all of his books. That fact that she had always kept his books was indisputably established by his formal statement to the police to that effect on 11/3/91. Uncle Bill also made it clear in his statement that his later burned and worthless house was his only asset of any value. The house which burned was uninsured. In addition to losing her home, Sonia also lost most of her own belongings, including furniture, clothes, her dogs, and a lifetime of keepsakes. It is obvious in light of these facts that the will draft was not a motive and that the prosecution was disingenuous in presenting it as such.

IX. SONIA'S STATEMENT

ALLEGATION: Sonia changed her story about the fire. The prosecution emphasized the alleged change as implied evidence of consciousness of guilt.

ANSWER: I have never been involved in an arson case in which allegations of story changing or inconsistency were not made against the suspect – whether they turned out to be guilty or not. In this case, a reading of the statements of all the witnesses leads to the conclusion that the witness never changed her story at all but merely expressed some uncertainty about whether her uncle had awakened her and said he was "going back for the dogs" or whether she might have dreamed this as she was waking to the choking smell of smoke.

The claim that Sonia changed her story began with the testimony of the neighbor Dois Clawson, who was the first person to whom Sonia spoke and who was still with her after she gave her brief formal statement:

> A. The only thing she did not seem to be clear about was that how she got – excuse me, how she knew to get out of the house. She first told me that Uncle Bill woke her up and told her to get out and then later she told me she wasn't sure whether she had imagined that he had come to the door and told her to get out or if it had actually happened.

The biggest fuss was caused by the extremely brief formal written statement that was coerced from her while she was still in shock in the hospital. As many as seven officials crowded into her hospital room turning a tragedy into a side show. When she reluctantly gave her terse statement to get rid of the badgering authorities, she limited it to the most basic certain facts as read to the Jury by Officer Carreon.

> A. It says, 'my uncle woke me, I can't remember if he shook me, or what. I couldn't see or breathe. I went out a window. I knocked on the neighbor's door. She held me. I tried to go back. That's all I can remember."

There is no conflict in Sonia's original and later statements, only an ongoing uncertainty about the accuracy of her memory.

CONCLUSION

I have spent thousands of hours sifting the data from this case, interviewing witnesses and experts and evaluating the theories of the prosecution. All my work has been performed free of charge.

I conclude that Sonia Cacy was convicted as a result of unrebutted junk science. Had she been provided with reasonably competent counsel and a bare minimum of competent expert help in the areas of fire investigation, fire debris analysis and pathology, all of the supposed scientific evidence used against her could have been exposed as worthless to the jury. This was a case based mainly on esoteric but misapplied science which was beyond the ability of the attorneys and jury to understand without guidance from suitable defense experts.

The linchpin of the prosecution's case, the analysis for gasoline, was incorrect as a matter of fact. This false evidence would have been inadmissible if the witnesses had told the truth about the fabricated documentation. Equally important, the exculpatory evidence of the negative analysis of the actual clothing remnants in the can would have been sufficient to alert the defense to the need for expert help if the evidence had not been misrepresented by both the district attorney and the prosecution's arson debris analyst.

Gerald L. Hurst

Gerald L. Hurst, PhD (Cantab)

SUBSCRIBED AND SWORN TO BEFORE ME on July 3, 1998, to certify which witness my hand and official seal.

Paula L. Sini

Notary Public, State of Texas